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IN THE UNITED STATES PATENT AND TRADEMARK

Box Patent Application
Assistant Commissioner for Patents
Washington, D.C. 20231

Attorney's Docket No.: 38184-69 (Cont. 1)

FILING TRANSMITTAL

This is a request for filing a Continuation Application under 37 C.F.R. § 1.53(b) of pending prior application Serial No. 08/864,700, filed May 28, 1997, of Allan E. Alcorn, et al., for **IMPROVED ELECTRONIC GAMING APPARATUS**

ENCLOSURES

- ☒ 13 page application including specification, claims and abstract;
 - ☒ 4 sheets (Figs.1-6) of ☒ informal/☐ formal drawings;
 - ☒ A Declaration, Power of Attorney & Petition (☒ signed/☐ unsigned);
 - ☒ A postcard for return to us as proof of receipt of the referenced documents.
- and**
- ☐ An Assignment of the invention with an assignment cover sheet;
 - ☒ Verified Statement Claiming Small Entity Status (37 CFR 1.9(f) and 1.27(b));
 - ☐ IDS (form PTO-1449) and copies of references;
 - ☐ An Associate Power of Attorney;
 - ☒ A certified copy of the priority documents (Under 35 USC 119);
 - ☐ A Power of Attorney by Assignee;
 - ☒ Other—Copy of 3-Month Extension of Time in pending application Serial No. 08/864,700 filed May 28, 1997 of Alcorn, et al.

TYPE OF FILING

- ☒ This application claims the benefit of an earlier filed U.S. Patent Application (35 USC 120).
- ☐ This application claims the benefit of the priority date of an earlier filed provisional patent application (35 USC 119).
- ☐ This is an application filed pursuant to 37 CFR 1.53, permitting receipt of a filing date upon filing of specification, claims and drawings, if required, with applicant being given a period of one month from the date of notice to file the fee and oath or declaration.
- ☐ In the event any parts of this application are missing, please treat this as a filing under 37 CFR 1.53 as defined just above.

CERTIFICATE OF MAILING (37 CFR 1.10(a))

CERTIFICATE OF MAILING BY "EXPRESS MAIL" - Rule 10: I hereby certify that this correspondence is being deposited on September 28, 2000 with the U.S. Postal Service "Express Mail Post Office to Addressee" under 37 CFR 1.10 as Express Mail No. EL597508225US addressed to: Box Provisional Patent Application, Assistant Commissioner for Patents, Washington, D.C. 20231

Date: September 29, 2000

Cheryl Ann Rogers
Cheryl Ann Rogers

FEE CALCULATION

The filing fee has been calculated as shown below:

				SMALL ENTITY	OR	OTHER THAN A SMALL ENTITY	
BASIC FEE Design Patent				\$155	\$	\$310	\$
BASIC FEE Utility Patent				\$345	\$345.00	\$760	\$
EXTRA FEES				RATE	FEE	RATE	FEE
Total claims	15	minus 20 =	0	x9 =	\$0	x18 =	\$
Independent Claims	2	minus 3 =	0	x39 =	\$0	x78 =	\$
<input checked="" type="checkbox"/> Multiple Dep. Claim				+130 =	\$	+260 =	\$
<input type="checkbox"/> Assignment				+40 =	\$	+40 =	\$
<input type="checkbox"/> Rule 53 Surcharge				+65 =	\$	+130 =	\$
TOTAL					\$345.00		\$

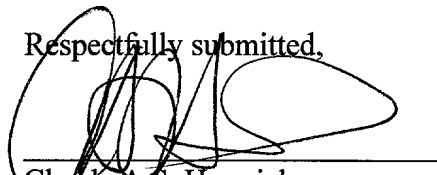
FEE PAYMENT

- ☐ Attached is Check No. 124461 in the sum of \$345.00 to cover the filing fee.
- ☐ Please charge Account No. 02-3964 the sum of \$ _____

FEE DEFICIENCY

- ☐ Please charge Account No. 02-3964 in the sum of \$ _____
- ☐ The Commissioner is authorized to charge (or credit any overpayment) to deposit account No. 02-3964:
- ☐ Any additional filing fees required under 37 CFR 1.16, except Rule 53 filings, which will be paid within the time permitted by PTOL 1533.
 - ☐ Assignment Recordal fees.
- ☐ The filing fee and surcharge under 37 CFR 1.16, patent application processing fees under 37 CFR 1.17 and patent issue fees under 37 CFR 1.18 are intended to be paid by our firm as they arise. As no abandonment is intended by any inadvertent nonpayment of fees, the Commissioner is hereby authorized to charge payment of such fees as from time to time come due, if not paid prior to due date to our Deposit Account No. 02-3964.

Respectfully submitted,


Claude A.S. Hamrick
Reg. No. 22,586

Dated: September 29, 2000

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Attorney's File No: 38184-0069
Applicants: Allan E. Alcorn and Harry H. Jenkins
Serial Number: 08/864,700 Filed: May 28, 1997

**VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY
STATUS (37 CFR 1.9(f) AND 1.27(c) - SMALL BUSINESS CONCERN**

I am:

- ☐ the owner of the small business concern identified below;
☒ an official of the small business concern empowered to act on behalf of the concern identified below;

Name of Concern: Silicon Gaming, Inc.

Address of Concern: 2800 West Bayshore Highway
Palo Alto, CA 94303

I hereby declare that the above-identified small business concern qualifies as a small business concern as defined in 13 CFR 121.318, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full time, part-time, or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention entitled "**Improved Electronic Gaming Apparatus**" by Allan E. Alcorn and Harry H. Jenkins, described in the specification filed herewith.

If the rights held by the above-identified small business concern are not exclusive, each individual, concern or organization having rights to the invention is listed below* and no rights to the invention are held by any person, other than the inventor, who could not qualify as a small business concern under 37 CFR 1.9(d) or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

*NOTE: Separate Verified Statements are required from each named person, concern, or organization having rights to the invention averring to their status as small entities (37 CFR 1.27)

NAME: _____
ADDRESS: _____

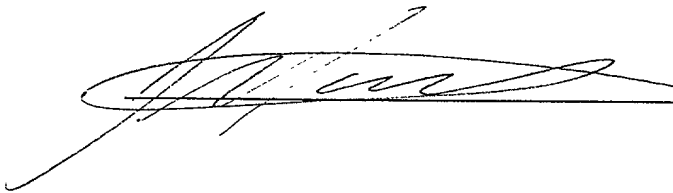
() INDIVIDUAL () SMALL BUSINESS () NONPROFIT ORGANIZATION

I acknowledge my duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the Issue Fee or any Maintenance Fee due after the date on which status as a small entity is no longer appropriate (37 CFR 1.28(b)).

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful, false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful, false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this Verified Statement is directed.

Name of Person Signing: Jeffrey Friedberg
Title: Vice President, Engineering
Address of Person Signing: Silicon Gaming, Inc.
2800 West Bayshore Highway
Palo Alto, CA 94303

Signature



Date: 6/12/97

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Specification

IMPROVED ELECTRONIC GAMING APPARATUS

BACKGROUND OF THE INVENTION

Field of the Invention

The present invention relates generally to electronic gaming apparatus, and more particularly to an unproved gaming machine for improving the play and display of gaming graphics utilizing a vertically oriented video screen having touch screen input as a player interface to the device.

Relation to Other Applications

This application is a continuation of copending U. S. Application Serial No. 08/864,700 filed May 28, 1997, which is a continuation-in-part of copending U.S. Application Serial No. 08/672,775, filed June 28, 1996, entitled "Dynamic Tournament Gaming Method and System," and is related to copending U.S. Application Serial No. 08/497,662, filed June 29, 1995, entitled "Electronic Casino Gaming System with Improved Play Capacity, Authentication and Security" Both applications are assigned to the Assignee of this present invention.

Brief Description of the Prior Art

Electronic gaming devices have long been provided for playing gambling games such as roulette, poker, bingo, keno, lotto and various other games, and have historically been constructed in a slot machine format typically including a pay board wherein the winning pay-out combinations are displayed; a play section in which electronic or mechanical reels, card-playing indicia or other gaming objects are displayed; and a third area in which a player interface is provided by means of an assortment of buttons, switches, etc. More modem gaming machines have included a video display screen (CRT tube) that is driven by an image generator coupled to a microprocessor that serves as the game controller. In such video implementations, standard television-style cathode ray tubes have normally been used, and electronically generated reels, cards and other

objects have been depicted thereon for implementing play of the game. In some
embodiments, the pay board is also included as part of the video display, but because this
limits the active display area available for gaming presentation, a different screen or type
of screen 2 separate and apart from the video display is often utilized. Touch screen
5 interfaces have also been used in gaming machines, but are often limited in their
application because of the limited space available on the video screen. Another limitation
of the prior art devices using video display screens is that the display has been quite
sterile in its presentation, often comprising nothing more than an attempt to electronically
present a two-dimensional image replicating the functional display elements of the prior
10 art mechanical gaming apparatus.

There is thus a need for an improved gaming station or machine that uses modern
video graphics and sound technology to provide a complete user interface that in at least
one aspect conveniently integrates pay board, play screen, and player input interface in a
single uniquely designed and oriented video screen format.
15

SUMMARY OF THE INVENTION

It is therefore a principal objective of the present invention to provide a gaming machine
20 having an improved video display format and user interface which uses state-of-the-art video
technology to provide animated television-quality video and graphics displays.

Another objective of the present invention is to provide an electronic gaming machine
having an electronic interface which is substantially larger than the standard television-type
video screen typically used in present casino-type games.

25 Still another objective, of the present invention is to provide an improved user interface
for slot machine-type games that readily accommodates in well-known three-part format, but on
a single screen, the pay board, play screen, and user interface commonly used in gaming stations.

Yet another objective of the present invention is to provide an enlarged video display
screen which provides a complete display of all gaming essentials, yet generally conforms to the
30 familiar and more or less standard "slot machine" footprint and height-to-width ratio common in
casinos throughout the world.

A further objective of the present invention is to provide a gaming machine having both

lifelike graphics and realistic high-quality sound generators.

Briefly, a presently preferred embodiment of the present invention includes a cabinet for housing video and sound generating electronics, coin-handling and pay-out mechanisms, and a video display screen. The display screen is substantially taller than it is wide and preferably has a touch screen associated therewith. Although the displayed video presentation may take any form, the preferred slot machine display embodiment includes graphics replicating the standard play board at top, game board in middle, and principal user input interface below.

An important advantage of the present invention is that since it uses a video screen that is substantially taller than it is wide, all familiar aspects of a standard slot machine can be dynamically and graphically presented on the video screen in their usual positional format.

Another advantage of the present invention is that a multitude of different types of games can be selectively displayed on a single gaming station.

Still another advantage of the present invention is that unusual attract modes can be selectively displayed on the video screen to attract the attention of potential players.

A still further advantage of the present invention is that unusual video displays can be presented to communicate and perhaps hold the attention of players as well as observers.

Yet another advantage of the present invention is that since a large part of the frontal surface area is occupied by the display screen, a plurality of adjacent machines can be electronically linked together and driven in concert with complementary video to create a segmented "picture wall" effect when not in use by players. And even when in use, an integrated background display can be used to change environmental "mood" or "setting" of the game room.

These and other objects and advantages of the present invention will no doubt become apparent to those skilled in the art after having read the following detailed description of the preferred embodiments which are illustrated in the several figures of the drawing.

IN THE DRAWING

Fig. 1 is a perspective view illustrating a gaming machine in accordance with the present invention;

Fig. 2 depicts a typical screen display in accordance with the present invention;

Fig. 3 is a functional block diagram illustrating the principal functional components used in the gaming machine of the present invention.; and

Figs. 4, 5 and 6 are diagrams generally illustrating software architecture and features of the preferred embodiment.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

5 A preferred embodiment of the present invention is depicted at 10 in Fig. 1 and includes a more or less rectangularly configured cabinet 12 forming an enclosure for the various functional mechanical, electrical and electronic components. The front face 14 of cabinet 12 is uniquely configured to include as the principal component thereof a video display screen 16 disposed in
10 portrait format with its vertical dimension being substantially larger than its horizontal dimension. As is apparent from the illustration, the screen 16 occupies a substantial part of the front face of the device 10. Positioned to the right of screen 16 is a currency input section 18 including a coin-receiving slot 20, a paper money-receiving slot 22, and a credit/debit card slot 24. A pair of buttons 23 and 25 may be provided for allowing the player to select a "cash" or
15 "credit" mode for payout of winnings.

Disposed beneath screen 16 and at the bottom of the front face is a coin drop receptacle 26. Immediately above the coin, chop receptacle are a pair of high-quality audio speakers 28 and 30. Above screen 16 is an annunciator 32 including a third high-quality audio speaker or signal generator 34 and a multi-colored, multi-light display apparatus 36. Disposed immediately
20 beneath screen 16 on a slightly protruding shelf 38 are a plurality of user interface buttons 40 that are of conventional configuration. Formed integral with the front face of display screen 16 is a transparent touch screen that is dynamically configurable to allow manual user inputs at screen positions determined by the software associated with the particular game or attract mode being presented.

25 On the right side of cabinet 12 is a conventional pull handle 39 that may be optionally used as a part of the user interface to the gaming apparatus.

The cabinet 12 was designed to coincide with the overall dimensions of traditional slot machines so that the device can be placed in existing casino carousels without requiring reconfiguration of the stands or machine layouts. The right side of the cabinet forms a
30 compartment for containing currency input devices such as coin and bill acceptors, a card reader, keypad, and perhaps a display for a player tracking network interface. A locked service door 41

forms the right side wall of the cabinet and allows access to the currency components in this section. The front 43 of the lower section of the enclosure contains a coin hopper (a cache of coins that is used to pay out the player's winnings when playing in cash mode). The back of the lower section of the cabinet (behind the hopper) contains a CPU box with all of the associated electronics and power supplies. A locked service door allows access to the hopper in this section.

Player tracking network electronics are located in the top of the system and are accessed by removing a top cover (not shown).

The cabinet layout, which is more or less traditional for video-type slot machines, leaves a tall and narrow section at the upper left for the CRT that forms the display screen 16. To maximize the screen area in the available space, a 26", wide screen CRT display device rotated 90° into a "portrait mode" is used with the screen origin at the bottom left corner, and the image scanned from left to right. For purposes of this disclosure "portrait mode" is defined as a display configuration in which a display screen has a height dimension that is substantially larger than its width dimension. The wide screen CRT has a 16x9 (height to width) aspect ratio and a 0.69mm dot pitch allowing for an 856x480 visible display area. Portrait mode configured display screens or CRT's having other aspect ratios may also be used. For example, although less desirable, a standard 4x3 CRT monitor rotated into a portrait mode could be used.

In accordance with one aspect of the present invention, when operating in a game play mode, the display screen may be electronically subdivided into three arbitrarily sized regions an upper region 15 in which a pay board will be displayed, setting forth the jackpot payouts as a function of the coins input; a mid region 17 in which a game board, play reels, card hands, or other game play indicia is displayed; and a lower region 19 in which touch screen "buttons" are displayed for facilitating player selection of various input functions such as "hold", "bet 1", "draw", etc. One example of a "3-way" screen configuration is illustrated in Fig. 2. Depending on the particular game being played, the dimensions of these regions may change. Furthermore, the configuration of the touch screen responsive areas within each region may likewise change to correspond to associated graphics displayed in one or more of the regions. Moreover, in "attract mode" the screen may be subdivided into a geometrical grid of regions, e.g., a 2x4 or 2x6 (etc.) grid in which passive or active game logos may be simultaneously displayed for selection by a player. In such mode the touch screen would typically be configured to call up the game

corresponding to the logo touched by the player.

An integrated touch screen overlaying the display screen, along with the series of "hard" buttons 40 arrayed along the bottom edge of the display, provide the main player interface to the system.

5 In Fig 3 of the drawing, a generalized block diagram depicts the principal functional components of the system and includes a central processing unit (CPU) 45, the CRT 16, a user interface 42 that includes the touch screen buttons 40 and pull handle 39, a video storage subsystem 44, an audio storage subsystem 46, a disk storage subsystem 48, a peripheral memory subsystem 50, an annunciator and sound system 52, a network I/O 54, a card reader 56, a coin
10 handler 58, and a bill reader 60. In the preferred embodiment, CPU 45 is a 133MHz Pentium processor using a combination of the DUCK Video Codec for motion video, A-RL (Alpha Run-Length) decoding of static graphics, and software compositing for the individual elements.

Although not shown in detail herein, the CPU 45 includes a motherboard, a PCI-based video board and SCSI controller, a peripheral memory board, a GPIO board, a power
15 transformer, a disk drive, and a CPU power supply. The peripheral memory board is installed on the mother board PCI bus and is used to replace the BIOS ROMs of the standard PC architecture. Whereas on standard mother boards the PCI-to-ISA bridge (P18) chip provides the interface to the system BIOS ROMs by subtractive decoding of PCI accesses in the normal PCI BIOS range and its high-memory aliases, the peripheral memory board in the preferred embodiment responds
20 to accesses to the BIOS address range using positive decoding, responding to the requested cycles before the P113 chip responds. This allows the ROM-based BIOS and OS to reside at these locations without modifying the mother board.

In addition, the peripheral memory board provides a removable subsystem containing all of the machine states, thereby allowing secure system auditing. The peripheral memory board
25 contains 1MB of EPROM to hold the BIOS and OS (including the secure loader described below), 64KB of nonvolatile RAM to implement a SafeStore system, and 128KB of electrically erasable PROM (BEPROM) to store the system configuration.

A peripheral memory controller performs byte-assembly and disassembly on memory reads/writes and parity generation on the PCI reads.

30 The preferred embodiment exhibits total immunity to Electric-Static Discharge (ESD) to a level of 27KV. The requirement for this level of ESD immunity is an artifact of low humidity

and prevalence of synthetic materials (carpeting, etc.) in Nevada casinos. All standard mother boards support an IEEE 1284 compatible parallel port, and such port provides the interface to the general purpose input/output (GPIO) board. The (GPIO) board provides an electrically isolated interface to the external device ports and maps them to registers accessible through the mother board parallel port.

The system software is designed to address the unique requirements of casino gaming machines, including high reliability and security, fault detection and recovery, and responsive performance. The system software architecture is illustrated in Fig. 4.

A pSOS real-time operating system serves as the basis for the software platform of the preferred embodiment. This pSOS system consists of a multi-tasking kernel, the pREPC, ANSI-C, run-time library functions, and a driver support library to access physical devices through a set of device drivers. The run-time Application Programmers Interface (API) is a layer of system software providing a set of standard functions that application programmers develop to. Because the API provides a layer of abstraction between the applications and the hardware, the applications are not affected if the hardware or lower level system software are modified. The API is divided into a series of managers, each of which provides either access to some physical device or provides some set of services for the programmer. Examples of these managers are shown in the table illustrated in Fig. 5.

The system applications include a Navigator, Play Stoppage, a suite of games, and the Machine Management System. The Navigator presents the player with an animated icon of each game. The animation describes the key features of the game; users enter a game by touching its icon. Each game is a custom application offering a specific set of propositions to the player. Each game is accompanied by on-line help that describes the rules of play, general disclaimers for the game, and so on. Play Stoppage is an application that runs short animations or video segments that entertain the player if a system fault occurs, while communicating information about why a game was interrupted and when it will be returned to play. The Machine Management System (MMS) provides a graphical interface to all technical support functions of the slot machine. This includes player conflict resolution, accounting, product configuration, and machine diagnostics.

As described in detail in the above-referenced U.S. Patent Application Serial No. 08/672,775, before software can be loaded from the hard disk, it must be verified as being an

authentic proprietary product. A secure loader is the system software component that loads executable files from the disk subsystem into RAM, verifies that the contents are correct, and then executes the image. The secure loader is based on the use of two-key cryptographic authentication from RSA Data Security, Inc. of Redwood City, California.

5 When a software release is ready for shipment, a HASH function designed for cryptographic use generates a unique fixed-length string of 128 bits for the loadable code image.

This string, called a message digest, is then encrypted using RSA software and the proprietor's private key to produce a digital signature for the image. The signature is then written to disk with the loadable code image. When the code image is loaded from the disk and
10 is ready to be executed during the system boot sequence, the secure loader decrypts the digital signature using the public key stored in ROM. The secure loader verifies that the image is authentic by comparing the message digest computed for the loadable code image with the message digest decrypted from disk. The software can be authenticated at any time since the console diagnostics include tools that allow the operator to query all loadable applications and
15 run the RSA verification algorithm on them on demand. The authentication process is not limited to just software images. Graphics files or any binary data set can be authenticated. Because the graphics images are so large, they are not verified every time a game is loaded. If needed, critical graphic images such as the faces of cards can be verified before initial use in a game.

20 A SafeStore application provides fault-tolerant storage for critical system data called safe objects stored in system nonvolatile SRAM. To facilitate recovery of information after a crash or system failure, state information about each safe object along with the object data is saved in an internal format known as a binary large object (BLOB). To protect against hardware or software faults corrupting SafeStore, all safe objects are mirrored across two independent nonvolatile
25 SRAMs. If corruption occurs by hard or soft failures to indicate locations in SRAM, or if complete SRAM failures occur, SafeStore will detect this corruption and recover the data.

Fig. 6 depicts a BLOB in SafeStore with all of the important BLOB header fields. The data check sum fields 0 and 1 contain the check sums of the data in data areas 0 and 1, respectively. The active data area pointer field indicates that data area 0 contains the latest data
30 written to SafeStore. The BLOB header check sum field contains a check sum of the BLOB header, including the data area check sums and the data area pointer. During a SafeStore update,

the BLOB header is read into main memory where the header check sum is computed and checked against the value of the header check sum field. If the check sum does not match, the system will tilt. Assuming it matches, the new data is copied into the inactive data area. The copy of the BLOB header in main memory is updated with the check sum of the new data; the active data area pointer is updated to point to the data area 1; and the new header check sum is computed and written to SafeStore.

Although the present invention has been described above in terms of specific embodiments, it is anticipated that alterations and modifications thereof will no doubt become apparent to those skilled in the art. For example, it is contemplated that video screens formed by other apparatus such as liquid crystal displays, field emission displays, interference element displays, projection TV, and perhaps holographic and other display technology may be used in place of the CRT device presently used in the preferred embodiment. Furthermore, other cabinet configurations and designs may be used to support a large portrait-mode display screen, and whereas the preferred embodiment utilizes a single means to form the display screen, it is contemplated that a similar result may be achieved by using a plurality of contiguous display devices synchronously driven to display different portions of a common image. It is therefore intended that the following claims be interpreted as covering all such alterations and modifications as fall within the true spirit and scope of the invention.

What is claimed is:

CLAIMS

1 1. A gaming machine of the type commonly referred to as a slot machine, comprising:

2 a cabinet having a front face and overall dimensions consistent with a traditional slot
3 machine;

4 video display means including a player viewing touch screen occupying a first portion of
5 said front face, said screen having a vertical dimension and a horizontal dimension, said vertical
6 dimension being substantially larger than said horizontal dimension, said screen being operative
7 in an attract mode to present a plurality of game identifying logos for touch selection by a game
8 player, and operative in a play mode to present animated video game graphics to the game
9 player, said graphics defining on said screen, during said play mode, a user interface region
10 having at least one active area for enabling player input, a gaming display region for displaying
11 game proposition indicia, and a pay-out chart region for displaying payout indicia corresponding
12 to the displayed proposition;

13 electronic means including a processing unit, video data storage means, audio data
14 storage means, and a video board communicatively coupled to said processing unit, and
15 software means

16 for normally causing said electronic means to display an attract mode presentation
17 on said screen,

18 for causing said electronic means in response to player touch selection of one of
19 said logos to extract preprogrammed video and audio data from said video and audio storage
20 means

21 for causing said electronic means to generate video signals for causing said video
22 display region

23 for causing said electronic means to generate audible sounds associated with said
24 graphics, and

25 for causing said electronic means to be responsive to subsequent player input via
26 said active area and operative to execute play of the selected game.

27
1 2. A gaming machine as recited in claim 1 wherein said video display screen has a 16x9

2 aspect ratio.

1 3. A gaming machine as recited in claim 1 wherein said video display means includes a
2 cathode ray tube having a display screen with a 16x9 aspect ratio.

1 4. A gaming machine as recited in claim 3 wherein the line traces of said cathode ray tube
2 are orthogonal relative to displayed image horizontal directions.

1 5. A gaming machine as recited in claim 1 wherein said cabinet includes an annunciator
2 means disposed above said display screen.

1 6. A gaming machine as recited in claim 1 wherein said electronic means includes a stereo
2 sound generating means.

1 7. (Once amended) A gaming machine as recited in claim 1 and further comprising
2 alternative player means including a plurality of buttons for allowing a player to assert gaming
3 input selection.

1 8. A gaming machine as recited in claim 1 having currency input means occupying a second
2 portion of said front face.

1 9. A gaming machine as recited in claim 8 and further comprising currency pay-out means
2 associated with a third portion of said front face.

1
2 10. In a gaming machine of the type commonly referred to as a slot machine and including a
3 display means, electronic means having a processing unit and a video board communicatively
4 coupled to the processing unit, the electronic means being operative to drive the display means to
5 produce gaming images on the display means, and player interface means, an improved display
6 means comprising:

7 means forming a display touch screen having a vertical dimension and a horizontal
8 dimension, said vertical dimension being substantially larger than said horizontal dimension,

9 said screen being operative in an attract mode to present a plurality of game identifying logos for
10 touch selection by a game player, and operative in a play mode to present associated motion
11 video game graphics to a game player, said graphics defining on said screen, during said play
12 mode, a user interface region having at least one active area for enabling player input, a gaming
13 display region for displaying game proposition indicia, and a pay-out chart region for displaying
14 payout indicia corresponding to the displayed proposition, the electronic means being
15 programmed to normally cause an attract mode presentation to be displayed on said screen, and
16 in response to player touch selection of one of said logos, said electronic means being
17 programmed to generate video signals for causing said video display means to display
18 corresponding game graphics on said display screen within said gaming display region, and to
19 generate audible sounds associated with said graphics, said electronic means being responsive to
20 subsequent player input via said active area and operative to execute play of the selected game.

1 11. In a gaming machine as recited in claim 10 wherein said display screen is formed by the
2 image producing surface of a cathode ray tube.

1 12. In a gaming machine as recited in claim 11 wherein the line traces of said cathode ray
2 tube are orthogonal relative to displayed image horizontal directions.

1 13. In a gaming machine as recited in claim 10 wherein said display means is a video display
2 device having an aspect ratio of 16x9.

1 14. In a gaming machine as recited in claim 10 wherein said interface means includes at least
2 one of the following: a touch screen; a plurality of manual input buttons; an actuating handle; a
3 card reader; a coin handler; a bill reader.

1 15. A gaming machine as recited in claim 1 wherein said video display means includes a
2 cathode ray tube having a display screen with a 4x3 aspect ratio.

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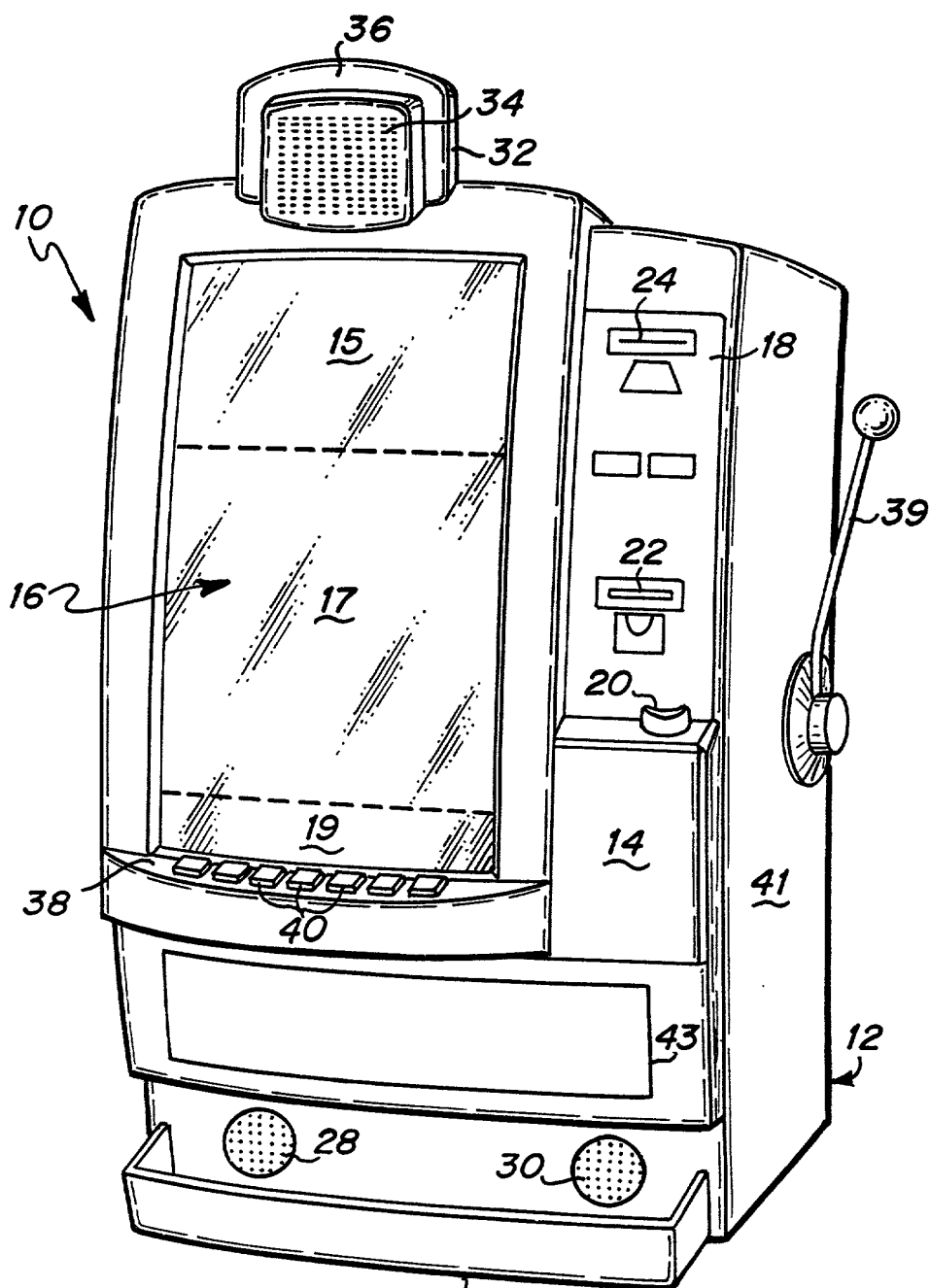


Fig.1 26

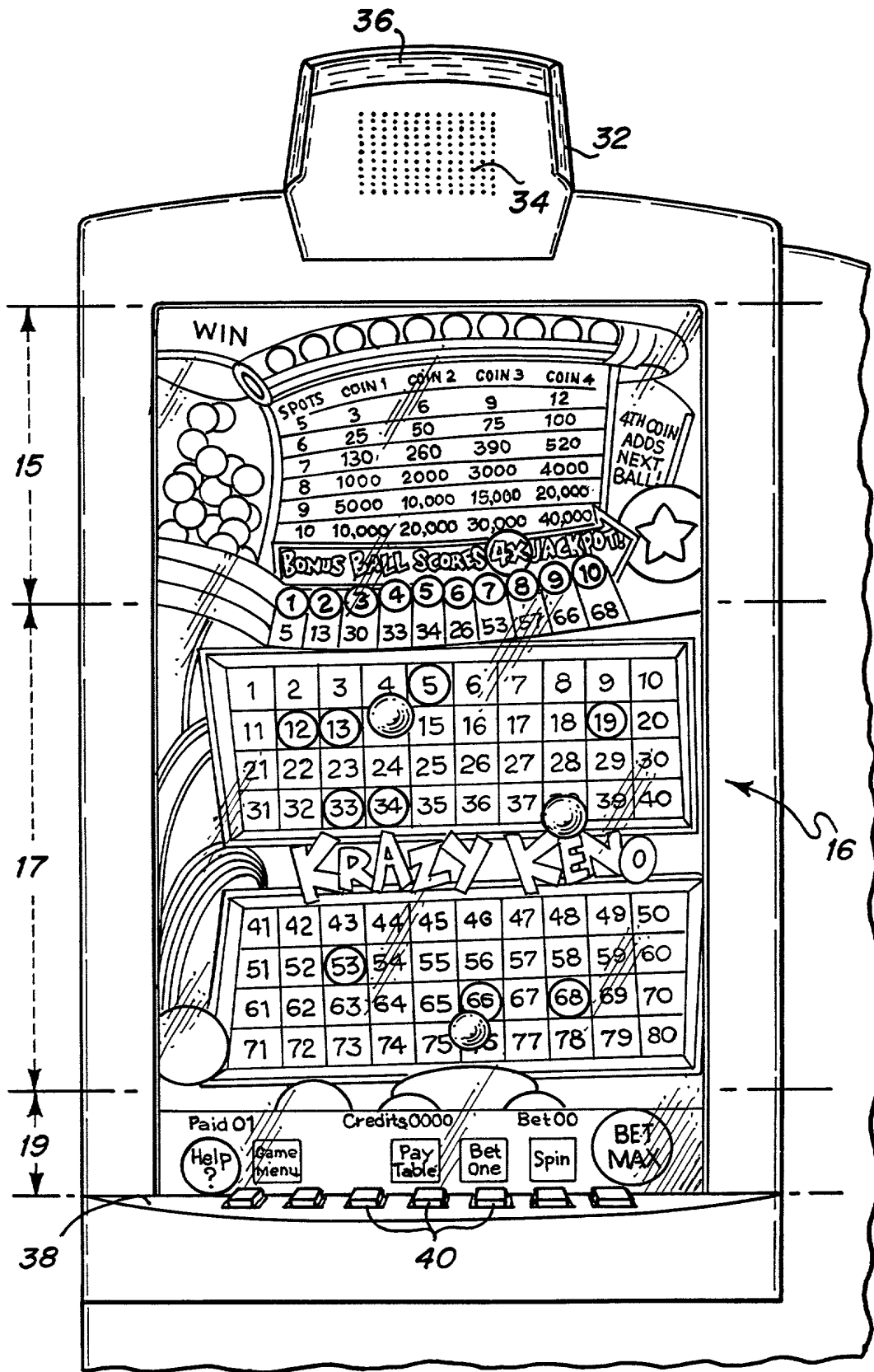


Fig.2

006260 CAT 2/95

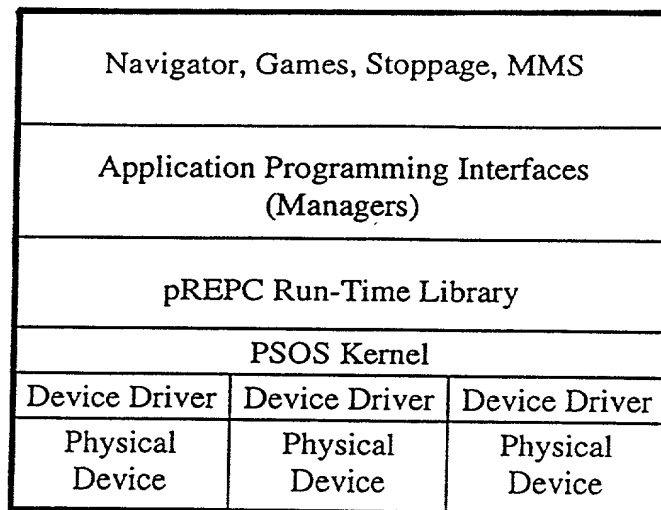
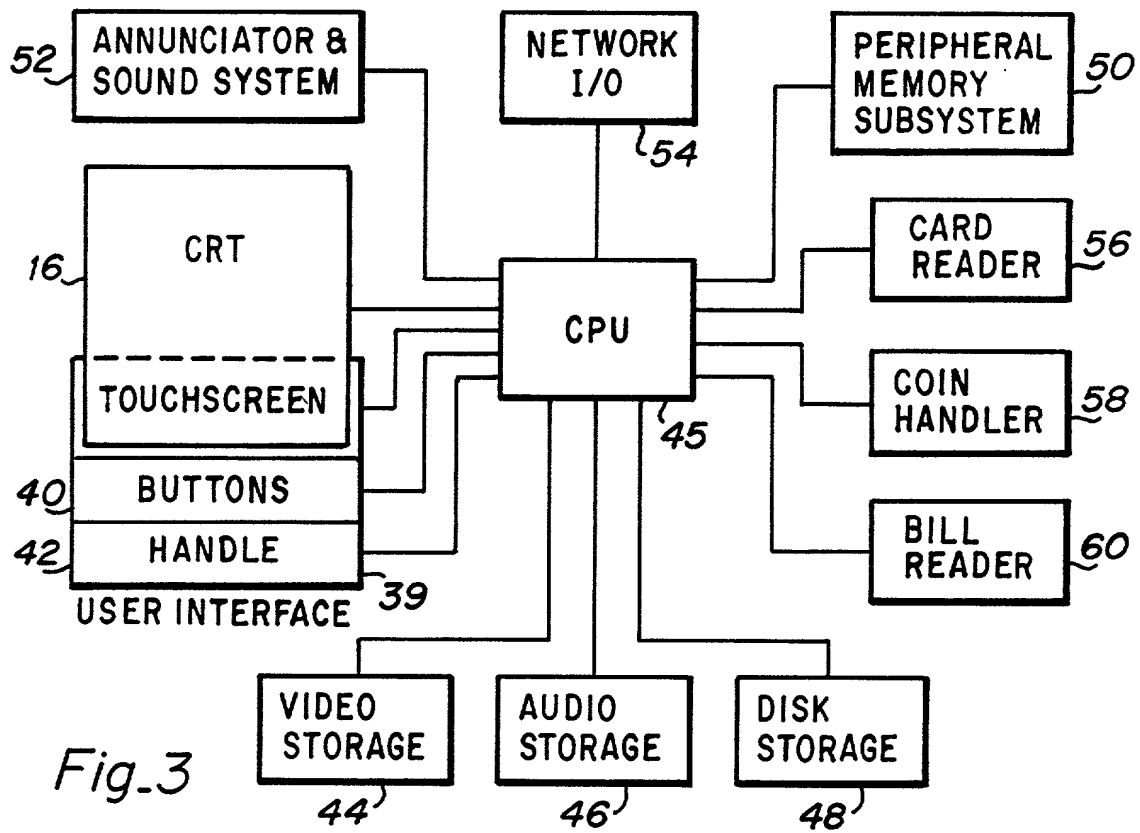


Fig. 4

Manager	Description
Data Streamer	Enables an application to use data within a large file without loading the entire file's contents into memory.
Display Manager	Enables an application to control screen drawing to the video display.
Cash Manager	Provides the application with a secure interface for monetary transactions .
Hotspot Manager	Provides the application interface to the touchscreen.
Button Manager	Provides the application interface to the hard buttons on the slot machine bezel.

Fig.5

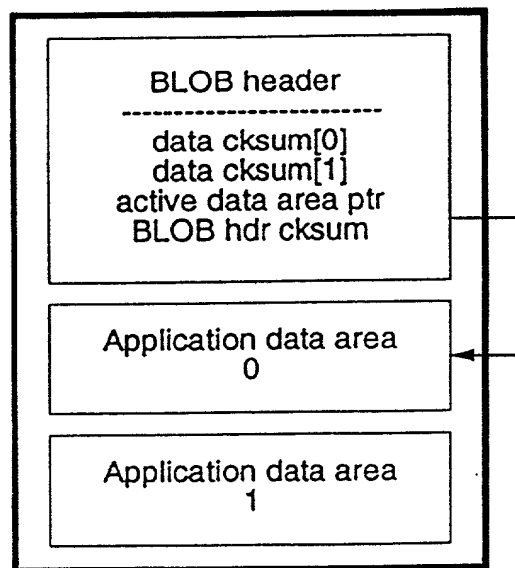


Fig.6

COMBINED DECLARATION, POWER OF ATTORNEY & PETITION

DECLARATION

As a below-named inventor, I hereby declare that:

- (i) my residence, post office address and citizenship are as stated below next to my name;
- (ii) I have reviewed and understand the contents of the attached specification including the drawing and claims as amended by any amendment referred to below;
- (iii) I believe I am the original, first and a joint inventor of the invention entitled:

IMPROVED ELECTRONIC GAMING APPARATUS

as described and claimed in the specification which was filed on May 28, 1997 as U.S. Patent Application Serial No. 08/864,700

- (iv) I hereby claim the benefit under 35 U.S.C. 120 of any United States patent application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of 35 U.S.C. 112, I acknowledge the duty to disclose material information as defined in 37 CFR 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

<u>08/672,775</u>	<u>June 28, 1996</u>	<u>pending</u>
Application Serial No.	Filing Date	Status

- (v) this application in part discloses and claims subject matter disclosed in my or our earlier filed pending application Serial No. 08/672,775; as to the subject matter of this application which is common to said earlier application, I do not know and do not believe that the same was ever known or used in the United States before my or our invention thereof or patented or described in any printed publication in any country before my or our invention thereof or more than one year prior to said earlier application, or in public use or on sale in the United States more than one year prior to said earlier application;
- (vi) as to the subject matter of this application which is not common to said earlier application, I do not know and do not believe that the same was ever known or used in the United States before my or our invention thereof or patented or described in any printed publication in any country before my or our invention thereof or more than one year prior to the date of this application, or in public use or on sale in the United States more than one year prior to the date of this application;

I declare further that all statements made above of my own knowledge are true and all statements made on information and belief are believed to be true; and these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

POWER OF ATTORNEY

I hereby appoint the following patent attorneys and/or patent agent(s) with full power of appointment, substitution and revocation to prosecute this application, to make alterations and amendments thereto, to receive the patent, and to transact all business connected therewith in the U.S. Patent Office and in all foreign patent offices in which corresponding applications for patent are filed.

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PETITION

Wherefore, I pray that Letters Patent be granted to me for the invention or discovery described and claimed in the above-mentioned specification and claims, and I hereby subscribe my name to the foregoing Declaration, Power of Attorney & Petition with references to the above-mentioned specification and claims.

SIGNATURES

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Inventor's Signature:

Allan E Alcorn

Date:

7/25/97

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Inventor's Signature:

H. Jenkins

Date:

7/21/97